CLAIMS

1. (Currently amended) A device comprising:

a memory; and

a processor coupled with the memory, the processor adapted to:

receive a reservation request from a first peripheral device for a wireless communication session between the first peripheral device and the processor;

receive another reservation request from a second peripheral device for another wireless communication session between the second peripheral device and the processor;

generate a schedule in response to the reservation request and the another reservation request, the schedule coordinating the wireless communication session during a first time window having a designated start time and a designated end time, the schedule coordinating the another wireless communication session to begin after the designated end time;

wirelessly transmit a multi-poll scheduling frame to the first peripheral device and the second peripheral device, the schedule encoded in the multi-poll scheduling frame;

wirelessly exchange data with the first peripheral device during the first time window;

wirelessly transmit a rescheduling frame in response to the wireless data exchange with the first peripheral device completing before the designated end time occurs, the rescheduling frame dynamically enabling the second peripheral device to begin the another wireless communication session before the designated end time, where the rescheduling frame is transmitted only if the data exchange with the first peripheral device is completed before the designated end time, and not transmitted at other times; and

wirelessly exchange data with the second peripheral device before the first time window ends pursuant to the rescheduling frame,

where the first peripheral device and the second peripheral device do not directly wirelessly communicate with each other; and

where the first peripheral device and the second peripheral device are not configured to transmit a rescheduling frame.

2. (Original) The device of claim 1, wherein the rescheduling frame is a null frame.

3. (Original) The device of claim 1,

wherein the generated schedule provides for exchanging data with only the second peripheral device during a second time window, and that the second time window alternate with the first time window according to a periodicity, and the processor is further adapted to:

encode data about the periodicity in the multi-poll scheduling frame.

4. (Original) The device of claim 3, wherein the rescheduling frame is a null frame.

5. (Currently amended) A device comprising:

a memory; and

a processor coupled with the memory, the processor adapted to

wirelessly transmit a reservation request to a first device for wireless communications with the first device,

wirelessly receive a multi-poll scheduling frame,

decode from the multi-poll scheduling frame a schedule for wireless communications, the schedule specifying a start time and an end time for a first time window, the schedule specifying a start time and an end time for a second time window, the second time window after and not overlapping the first time window, the first time window for data exchange between the first device and a second device, the second time window for data exchange between the first device and the device,

during the first time window, wirelessly receive a rescheduling frame from the first device, where the rescheduling frame is received only if the data exchange between the first device and the second device is completed before the end time of the first time window, and not received at other times,

in response to the rescheduling frame, dynamically reset the start time of the second time window to begin before the end time of the first time window, and

before the end time of the first time window, wirelessly exchange data with the first device;

where the device and the first device do not directly wirelessly communicate with each other; and

where the device and the first device are not configured to transmit a rescheduling frame.

6. (Original) The device of claim 5, wherein the second time window is rescheduled to start immediately after the rescheduling frame.

7. (Original) The device of claim 5, wherein the rescheduling frame is a null frame.

8. (Original) The device of claim 5, wherein the processor is further adapted to: decode from the received multi-poll scheduling frame periodicity data about alternating the first time window and the second time window.

9. (Original) The device of claim 8, wherein the second time window is rescheduled to start immediately after the rescheduling frame.

10. (Original) The device of claim 8, wherein the rescheduling frame is a null frame.

11. (Currently amended) An article comprising: a storage medium, said storage medium having stored thereon instructions, that, when executed by at least one device, result in:

generating a schedule for wirelessly exchanging data during a wireless communication session with a first peripheral device during a first time window, and for wirelessly exchanging data with a second peripheral device after the first time window, the schedule generated in response to a request for the wireless communication session from the first peripheral device and in response to another request for another wireless communication session from the second peripheral device;

wirelessly transmitting at least one multi-poll scheduling frame that encodes the schedule, the multi-poll scheduling frame containing instructions for the first peripheral device and the second peripheral device;

wirelessly exchanging data with the first peripheral device after the scheduled first time window starts;

completing wirelessly exchanging data with the first peripheral device before the first time window ends;

wirelessly transmitting a rescheduling frame to the second peripheral device that dynamically during the same wireless communication session enables the second peripheral device to start wirelessly exchanging data before the end of the first time window, where the rescheduling frame is transmitted only if the data exchange with the first peripheral device is completed before the end time of the first time window ends, and not transmitted at other times; and

wirelessly exchanging data with the second peripheral device before the first time window ends,

where the first peripheral device and the second peripheral device do not directly wirelessly communicate with each other; and

where the first peripheral device and the second peripheral device are not configured to transmit a rescheduling frame.

12. (Original) The article of claim 11, wherein the rescheduling frame is a null frame.

13. (Original) The article of claim 11,

wherein the generated schedule provides for exchanging data with only the second peripheral device during a second time window, and that the second time window alternate with the first time window according to a periodicity,

and the instructions further result in:

encoding data about the periodicity in the multi-poll scheduling frame.

14. (Original) The article of claim 13, wherein the rescheduling frame is a null frame.

15. (Currently amended) An article comprising a storage medium, said storage medium having stored thereon instructions, that, when executed by a first wireless device, result in:

wirelessly transmitting a reservation request for a wireless communication session with a second wireless device;

wirelessly receiving a multi-poll scheduling frame, the multi-poll scheduling frame including instructions for the first wireless device and a third wireless device;

decoding from the received multi-poll scheduling frame a schedule, the schedule identifying a start time and a stop time of a first time window for wireless communication between the second wireless device and the third wireless device, the schedule identifying a start time and a stop time of a second time window for wireless communication between the second wireless device and the first wireless device, the start time for the second time window scheduled after the stop time for the first time window;

in response to receiving a rescheduling frame during the first time window, the rescheduling frame directing the start time for the second time window to begin before the stop time for the first time window, dynamically rescheduling the start time for the second time window to occur prior to the stop time for the first time window, where the rescheduling frame is received only if the wireless communication during the first time window ends before the stop time for the first time window, and not received at other times; and

wirelessly exchanging data with the second wireless device before the stop time for the first time window;

where the first wireless device and the third wireless device do not directly wirelessly communicate with each other; and

where the first wireless device and the third wireless device are not configured to transmit a rescheduling frame.

16. (Original) The article of claim 15, wherein the second time window is rescheduled to start immediately after the rescheduling frame.

17. (Original) The article of claim 15, wherein the rescheduling frame is a null frame.

18. (Original) The article of claim 15, wherein the instructions further result in:

decoding from the received multi-poll scheduling frame periodicity data about alternating the first time window and the second time window.

19. (Original) The article of claim 18, wherein the second time window is rescheduled to start immediately after the rescheduling frame.

20. (Original) The article of claim 18, wherein the rescheduling frame is a null frame.

21. (Previously presented) A method comprising:

receiving reservation requests from a first peripheral device and a second peripheral device;

generating a schedule that specifies a start time for a first time window, a stop time for the first time window, and a start time for a second time window, the first time window for wirelessly receiving a first data transmission from the first peripheral device, the second time window for wirelessly receiving a second data transmission from the second peripheral device, the start time of the second time window occurring after the stop time of the first time window;

wirelessly transmitting a multi-poll scheduling frame that encodes the schedule, the multi-poll scheduling frame containing instructions for the first peripheral device and for the second peripheral device;

wirelessly receiving the first data transmission during the first time window, the first data transmission completing before the stop time of the first time window;

wirelessly transmitting a rescheduling frame that directs the second peripheral device to begin the second data transmission before the stop time for the first time window, where the rescheduling frame is transmitted only if the first data transmission is completed before the stop time of the first time window, and not transmitted at other times; and

wirelessly receiving a portion of the second data transmission during the first time window.

22. (Original) The method of claim 21, wherein the rescheduling frame is a null frame.

23. (Previously presented) The method of claim 21, wherein the schedule provides for exchanging data with only the second peripheral device during a second time window, and that the second time window alternate with the first time window according to a periodicity,

and further comprising:

encoding data about the periodicity in the multi-poll scheduling frame.

24. (Original) The method of claim 23, wherein the rescheduling frame is a null frame.

25. (Currently amended) A method comprising:

wirelessly transmitting a reservation request for a wireless communication session to an access point;

wirelessly receiving a multi-poll scheduling frame associated with the wireless communication session;

decoding from the received multi-poll scheduling frame a schedule for a first time window during which to wirelessly exchange data between the access point and a first wireless device and for a second time window during which to wirelessly exchange data between the access point and a second wireless device, the second time window occurring after the first time window and not overlapping the first time window, the schedule specifying a start time and an end time for the first time window and the second time window;

during the first time window, wirelessly receiving a rescheduling frame, where the rescheduling frame is received only if the start time of the second time window is to be rescheduled before the end time of the first time window, and not at other times;

in response to the rescheduling frame, rescheduling the start time of the second time window to occur before the end time of the first time window; and

wirelessly exchanging data before the first time window ends;

where the first wireless device and the second wireless device do not directly wirelessly communicate with each other;

where the first wireless device and the second wireless device are not configured to transmit a rescheduling frame.

26. (Original) The method of claim 25, wherein the second time window is rescheduled to start immediately after the rescheduling frame.

27. (Original) The method of claim 25, wherein the rescheduling frame is a null frame.

28. (Original) The method of claim 25, further comprising:

decoding from the received multi-poll scheduling frame periodicity data about alternating the first time window and the second time window.

29. (Original) The method of claim 28, wherein the second time window is rescheduled to start immediately after the rescheduling frame.

30. (Original) The method of claim 28, wherein the rescheduling frame is a null frame.